

509,847  
10/509847

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



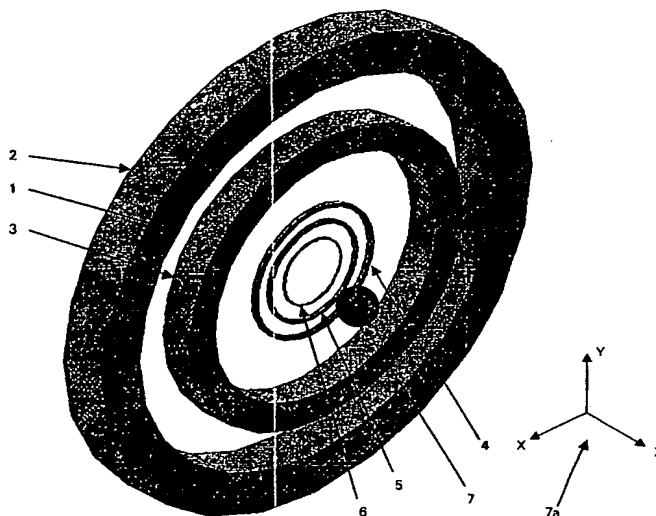
(43) International Publication Date  
13 November 2003 (13.11.2003)

PCT

(10) International Publication Number  
**WO 03/092496 A1**

- (51) International Patent Classification<sup>7</sup>: **A61B 5/055**,  
A61M 25/01, G01R 33/28
- (21) International Application Number: PCT/GB03/01579
- (22) International Filing Date: 10 April 2003 (10.04.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0209892.9 30 April 2002 (30.04.2002) GB
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:  
US 0209892.9 (CIP)  
Filed on 30 April 2002 (30.04.2002)
- (71) Applicant (for all designated States except US): **OXFORD INSTRUMENTS SUPERCONDUCTIVITY LIMITED** [GB/GB]; Old Station Way, Eynsham, Witney, Oxford OX8 1TL (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SLADE, Robert, Andrew** [GB/GB]; Grey Cottage, Mill Lane, Cassington, Witney, Oxon OX8 1DL (GB). **MCDUGALL, Ian**,
- Leitch [GB/GB]; 16 Lees Heights, Charlbury, Oxon OX8 3EL (GB).
- (74) Agent: **GILL JENNINGS & EVERY**; Broadgate House, 7 Eldon Street, London EC2M 7LH (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND ASSEMBLY FOR MAGNETIC RESONANCE IMAGING AND CATHETER STERRING



(57) Abstract: An imaging and catheter steering assembly comprising a magnetic field generating assembly (1-6) operable in a first mode to generate a first magnetic field in a working volume (7) located outside the assembly, the first magnetic field being suitable for use in a catheter, steering procedure. In a second mode the assembly (1-6) generates a second, static magnetic field in the working volume (7) suitable for conducting a magnetic resonance imaging process (MRI), the second magnetic field being more uniform in the working volume than the first magnetic field. A catheter (67) has a magnetic seed attached whose orientation, and hence the steering direction of the catheter, is determined by interaction with the first magnetic field.

WO 03/092496 A1